What is claimed is:

1.   A method of cooperatively processing public data, comprising:

distributing the public data to private representative states;

without holding an exclusive privilege to write to the public data, generating private states of the public data by processing one or more private representative states of the public data; and

updating the public data by cooperatively posting data from the private representative states.

2.   The method of claim 1, further comprising concurrently registering at least one of the one or more generated private states to retentive media.

3.   The method of claim 2, wherein said processing of the one or more private representative states of the public data is oriented to a concurrently registered private state, whereby a startup procedure re-triggering any previously running process from a given phase of operation automatically resumes an active process or state, should it be terminated, however inadvertently.

4.   The method of claim 2, wherein:

the one or more private representative states of the public data are stored in a table.

5.   The method of claim 4, wherein private representative states of the public data are negotiated by means of any number of identifying fields, classifying states relevant to processing.

6.   The method of claim 2, further comprising:

retaining one or more of the generated private states in retentive media associated with a remote system.

5   7.   The method of claim 6, wherein retaining one or more of the generated private states in retentive media associated with the remote system is performed in response to detecting a write to remotely maintained state event.

8.   The method of claim 2, further comprising causing one or more nodes of

10 cooperative applications to register separate copies of one or more private representative states to retentive media in conjunction with registration of a separate copy of the public data to retentive media.

9.   The method of claim 1, further comprising:

15   using one or more cooperative resource descriptors to negotiate cooperative resources related to public data,

wherein the one or more cooperative resource descriptors relate the cooperative resources to the public data.

20 10.   The method of claim 9, further comprising:

using a common organization of data processing resources in relation to a public data resource; and

in response to identifying any one of the one or more cooperative resource descriptors to focusable processes, negotiating the data processing resources designated by

25 the identified cooperative resource descriptor in accordance with the common organization.

11. The method of claim 10, further comprising:

interchangeably focusing processes operating on the organization of data processing resources; and

managing the availability of resources to processes so as to enable a given
5   organization of data processing resources to be negotiated.

12. The method of claim 9, further comprising:

using a graphic control to invoke a process on a public or private data resource identified by a focused cooperative resource descriptor.

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13. The method of claim 9, wherein an intended cooperative resource descriptor, or organization as indicated by a cooperative resource descriptor, is focused automatically in response to an event or condition devised to be unique and to coincide with demand for resources described by the resource descriptor or belonging to the organization.

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14. The method of claim 13, further comprising:

concurrently registering to retentive media an identity of the focused cooperative resource descriptor in response to focusing the cooperative resource descriptor; and

after termination of the application, initiating a subsequent session of the
20   application, including re-imposing conditions triggering re-focus of the cooperative resources associated by the cooperative resource descriptor;

whereby the subsequent session of the application is automatically restored with a cooperative focus of the application intact.

25   15. The method of claim 13, further comprising:

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concurrently registering to retentive media an identity of a descriptor of interfaces associated with the organization of cooperative resources needed by the interfaces;

after termination of the application, initiating a subsequent session of the application, including re-imposing conditions triggering re-focus of the cooperative

5 resources associated by the cooperative resource descriptor;

whereby the subsequent session of the application is automatically restored with a cooperative focus of the application intact.

16.   The method of claim 1, wherein:

10   the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private undo state embodied in retentive media, that represents an earlier state of processing on the public data; and

the method further comprises concurrently registering the private work state to

15 the private undo state.

17.   The method of claim 1, wherein:

the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

20   the private representative states include a private re-do state embodied in retentive media, that represents an earlier state of processing that, if an undo process was performed, existed just prior to performance of an undo process, or otherwise exists as originally distributed and potentially modified thereafter by other processes; and

the method further comprises concurrently registering the private re-do state to

25 the private work state.

18.   The method of claim 1, wherein:

        the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

        the private representative states include a private re-do state embodied in retentive media, that represents an earlier state of processing that, if an undo process was performed, existed just prior to performance of an undo process, or otherwise exists as originally distributed and potentially modified thereafter by other processes;

        the private representative states include a private undo state embodied in retentive media, that represents an earlier state of processing on the public data; and

        the method further comprises concurrently registering the private work state to the private re-do state, and thereafter concurrently registering the private undo state to the private work state.

19.   The method of claim 1, wherein:

        the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

        the private representative states include a private original state embodied in retentive media;

        distributing the public data to the private work area includes distributing the public data to the private original state; and

        the method further comprises concurrently registering the private original state to the private work state.

20.   The method of claim 1, wherein:

        the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private original state embodied in retentive media;

the private representative states include one or more other representative states embodied in retentive media; and

5　　　　the method further comprises assigning the private original state to the one or more other representative states and to the private work state,

wherein assigning the private original state to the other representative states comprises concurrently registering the private original state to the other representative states, and assigning the private original state to the private work state comprises

10　concurrently registering the private original state to the private work state.

21.　　The method of claim 1, wherein:

the private representative states are embodied in retentive media; and

the method further comprises, after distributing the public data to the private

15　representative states embodied in retentive media, again distributing the public data to the private representative states embodied in retentive media.

22.　　The method of claim 1, wherein:

the private representative states are embodied in retentive media; and

20　　　　the method further comprises, after distributing the public data to the private representative states embodied in retentive media, distributing to the private representative states only those fields of the public data that correspond to unmodified fields of the private representative states.

25　23.　　The method of claim 22, wherein:

one or more of the private representative states embodied in retentive media include a private work state that represents a present state of processing on the public data; and

the method further comprises:

5   detecting that a field of the private work state is presently under processing, and in response thereto treating said field of the private work state as a modified field of the private representative states.

24.   The method of claim 1, wherein:

10   the private representative states includes a private work state that represents a present state of processing on the public data;

the private representative states includes a private original state;

distributing the public data to the private representative states includes distributing the public data to the private original state; and

15   updating the public data by cooperatively posting data from the private representative states comprises comparing the private work state to the private original state and cooperatively posting to the public data only those fields of the private work state which differ from corresponding fields of the private original state.

20   25.   The method of claim 24, wherein the private work state and the private original state are embodied in retentive media.

26.   The method of claim 24, further comprising:

prior to updating the public data, updating the private original state to reflect data
25   previously posted to the public data.

27.   The method of claim 24, wherein cooperatively posting to the public data only those fields of the private work state that differ from corresponding fields of the private original state comprises:

repeatably attempting to obtain a privilege to write to the public data until the privilege is obtained;

writing differentiated fields of the private work state to the public data; and

thereupon releasing the privilege to write to the public data,

wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

28.   The method of claim 27, wherein the method further comprises:

writing to the private original state, data written to the public data.

29.   The method of claim 1, wherein:

one or more of the private representative states includes a private work state that represents a present state of processing on the public data;

one or more of the private representative states includes a private last posted state;

distributing the public data to the private representative states embodied in retentive media includes distributing the public data to the private last posted state; and

updating the public data by cooperatively posting data from the private representative states comprises comparing the private work state to the private last posted state, cooperatively posting to the public data only those fields of the private work state which differ from corresponding fields of the private last posted state, and thereupon assigning to the last posted state, fields posted to the public data.

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30.   The method of claim 29, wherein the private work state and the private last posted state are embodied in retentive media.

5   31.   The method of claim 29, wherein cooperatively posting to the public data only those fields of the private work state that differ from corresponding fields of the private last posted state comprises:

        repeatably attempting to obtain a privilege to write to the public data until the privilege is obtained;

10   writing differentiated fields of the private work state to the public data; and

        thereupon releasing the privilege to write to the public data,

        wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

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    32.   The method of claim 31, wherein the method further comprises:

        writing to the private last posted state, data written to the public data.

    33.   The method of claim 1, wherein cooperatively posting data from the private
20 representative states comprises:

        obtaining a privilege to write to the public data;

        writing the data from the private representative states to the public data; and

        thereupon releasing the privilege to write to the public data,

wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

5   34.   The method of claim 33, wherein obtaining the privilege to write to the public data comprises:

repeatably attempting to obtain the privilege to write to the public data until the privilege is obtained.

10   35.   The method of claim 33, further comprising delegating performance of obtaining the privilege to write to the public data to a cooperative processing object.

36.   The method of claim 33, further comprising:

delegating, to a cooperative processing object, performance of obtaining the
15   privilege to write to the public data, performance of writing the data from the private representative states to the public data, and performance of releasing the privilege to write to the public data; and

the cooperative processing object further delegating, to a delegated cooperative processing object, performance of obtaining the privilege to write to the public data,
20   performance of writing the data from the private representative states to the public data, and performance of releasing the privilege to write to the public data.

37.   The method of claim 36, further comprising:

detecting that performance of obtaining the privilege to write to the public data,
25   performance of writing the data from the private representative states to the public data, and performance of releasing the privilege to write to the public data have been successfully delegated to the delegated cooperative processing object, and in response

thereto, the cooperative processing object passing control to a subsequent phase of processing.

38.   The method of claim 37, further comprising:

5   concurrently registering a phase identifier to retentive media so that a process iterating from the registered phase identifier resumes operation.

39.   The method of claim 36, further comprising:

        concurrently registering a phase identifier to retentive media so that a process
10   iterating from the registered phase identifier resumes operation.

40.   The method of claim 1, wherein cooperatively posting data from the private representative states comprises:

        delegating performance of cooperative posting to a delegated cooperative posting
15   object,

        wherein in response to said delegating, the delegated cooperative posting object performs:

        repeatably attempting to obtain a privilege to write to the public data until the privilege is obtained;

20   writing one or more of the private states to the public data; and

        thereupon releasing the privilege to write to the public data,

        wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

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41.   The method of claim 40, wherein the delegated cooperative posting object is distinct from a cooperative posting object that performs the delegating step.

42.   The method of claim 1, wherein:

one or more of the private representative states embodied in retentive media includes a private work state that represents a present state of processing on the public data;

one or more of the private representative states embodied in retentive media includes a private original state that represents the public data as initially distributed to the private representative states; and

distributing the public data to the private representative states comprises:

distributing a single copy of the public data to an assignment compatible instance of the public data in a local private work area;

distributing the single copy of the public data from the assignment compatible instance of the public data in the local private work area to a remainder of the private representative states;

locally establishing an obligation to post to the public data by detecting a difference between the private original state and the private work state; and

performing cooperative posting to the public data only if the obligation to post to the public data is established.

43.   The method of claim 42, further comprising:

updating the private original state to reflect data being posted to the public data.

44.   The method of claim 1, further comprising:

storing in the private representative states an auxiliary state that is not representative of the public data, and that is not representative of processing of the public data.

5   45.   The method of claim 44, further comprising using the auxiliary state as part of a process.

46.   The method of claim 1, wherein distributing the public data to the private representative states and updating the public data by cooperatively posting data from the

10   private representative states are performed by a cooperative processing object.

47.   The method of claim 46, further comprising the cooperative processing object conditionally navigating to a new public data instance based upon successful completion of updating the public data by cooperatively posting data from the private representative

15   states.

48.   The method of claim 47, wherein updating the public data by cooperatively posting data from the private representative states is performed in response to a write to public instance event that is invoked by the cooperative processing object in response to

20   detection of an attempted navigation to the new public data instance.

49.   The method of claim 1, wherein the private representative states comprise:

   a local private work area; and

   a remote private work area.

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50.   The method of claim 1, wherein the public data is stored in a database system.

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51.   The method of claim 1, wherein distributing the public data to the private representative states and updating the public data by cooperatively posting data from the private representative states are performed by one or more operating system objects.

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52.   The method of claim 1, further comprising:

a server-side application assigning a unique identification to a client application session;

passing a universal resource indicator to a local application, wherein the universal resource indicator includes the unique identification and a process argument;

associating records of one or more private representative states with the client application session and one or more associated, processed data by means of the unique identification;

passing the universal resource indicator from a client system to the server-side application; and

the server-side system using the universal resource indicator to resume the client application session.

53.   The method of claim 52, further comprising:

logging the universal resource indicator to a table in response to the local application requesting a universal resource indicator from the server-side application.

54.   The method of claim 53, further comprising:

using the universal resource indicator to identify a last log entry in the table; and

using the identified last log entry in the table to restore a previous, ongoing navigational and/or work status of a local application.

55.   The method of claim 54, further comprising:

presenting to the local application a retained history of client navigation.

56.   The method of claim 55, wherein the retained history of client navigation is in the form of links comprising one or more universal resource indicators of the history.

57.   The method of claim 1, further comprising:

restricting data-oriented operations to permitted, integral data.

58.   A machine-readable storage medium having stored thereon one or more instructions for causing a processor to effect a cooperative application development template, the template comprising:

an application abstraction that includes:

logic that interfaces with public data;

logic that interfaces the cooperative application with a private representative state of the public data;

logic that distributes public data to one or more private representative states of the cooperative application; and

logic that makes available to the cooperative application, cooperative posting to the public data of a private representative state,

wherein cooperative posting to the public data of the private representative state comprises:

repeatably attempting to obtain a privilege to write to the public data until the privilege is obtained;

5   writing the data from the private representative state to the public data; and

thereupon releasing the privilege to write to the public data,

wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

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59.   The machine-readable storage medium of claim 58, wherein the logic that interfaces the cooperative application with the private representative state ensures that a private state generated by the cooperative application is concurrently registered to retentive media.

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60.   An apparatus for cooperatively processing public data, comprising:

logic that distributes the public data to private representative states;

logic that, without holding an exclusive privilege to write to the public data, generates private states of the public data by processing one or more private representative 20   states of the public data; and

logic that updates the public data by cooperatively posting data from the private representative states.

61.   The apparatus of claim 60, further comprising logic that concurrently registers at 25   least one of the one or more generated private states to retentive media.

62.   The apparatus of claim 61, wherein said processing of the one or more private representative states of the public data is oriented to a concurrently registered private state, whereby a startup procedure re-triggering any previously running process from a given phase of operation automatically resumes an active process or state, should it be terminated, however inadvertently.

63.   The apparatus of claim 61, wherein:

the one or more representative states of the public data are stored in a table.

64.   The apparatus of claim 63, further comprising logic that negotiates representative states of the public data by means of any number of identifying fields, classifying states relevant to processing.

65.   The apparatus of claim 61, further comprising:

logic that retains one or more of the generated private states in retentive media associated with a remote system.

66.   The apparatus of claim 65, wherein the logic that retains one or more of the generated private states in retentive media associated with the remote system operates in response to detecting a write to remotely maintained state event.

67.   The apparatus of claim 61, further comprising logic that causes one or more nodes of cooperative applications to register separate copies of one or more private representative states to retentive media in conjunction with registration of a separate copy of the public data to retentive media.

68.   The apparatus of claim 60, further comprising:

        logic that uses one or more cooperative resource descriptors to negotiate
cooperative resources related to public data,

        wherein the one or more cooperative resource descriptors relate the cooperative
5   resources to the public data.

69.   The apparatus of claim 68, further comprising:

        logic that uses a common organization of data processing resources in relation to
a public data resource; and

10   logic that, in response to identifying any one of the one or more cooperative
resource descriptors to focusable processes, negotiates the data processing resources
designated by the identified cooperative resource descriptor in accordance with the
common organization.

15 70.   The apparatus of claim 69, further comprising:

        logic that interchangeably focuses processes operating on the organization of data
processing resources; and

        logic that manages the availability of resources to processes so as to enable a
given organization of data processing resources to be negotiated.

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71.   The apparatus of claim 68, further comprising:

        logic that uses a graphic control to invoke a process on a public or private data
resource identified by a focused cooperative resource descriptor.

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72.   The apparatus of claim 68, further comprising logic that automatically focuses an intended cooperative resource descriptor, or organization as indicated by a cooperative resource descriptor, in response to an event or condition devised to be unique and to coincide with demand for resources described by the resource descriptor or belonging to the organization.

73.   The apparatus of claim 72, further comprising:

logic that concurrently registers to retentive media an identity of the focused cooperative resource descriptor in response to focusing the cooperative resource descriptor; and

logic that, after termination of the application, initiates a subsequent session of the application, including re-imposing conditions triggering re-focus of the cooperative resources associated by the cooperative resource descriptor;

whereby the subsequent session of the application is automatically restored with a cooperative focus of the application intact.

74.   The apparatus of claim 72, further comprising:

logic that concurrently registers to retentive media an identity of a descriptor of interfaces associated with the organization of cooperative resources needed by the interfaces; and

logic that, after termination of the application, initiates a subsequent session of the application, including re-imposing conditions triggering re-focus of the cooperative resources associated by the cooperative resource descriptor;

whereby the subsequent session of the application is automatically restored with a cooperative focus of the application intact.

75.   The apparatus of claim 60, wherein:

the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private undo state embodied in retentive media, that represents an earlier state of processing on the public data; and

5   the apparatus further comprises logic that concurrently registers the private work state to the private undo state.

76.   The apparatus of claim 60, wherein:

the private representative states include a private work state embodied in
10   retentive media, that represents a present state of processing on the public data;

the private representative states include a private re-do state embodied in retentive media, that represents an earlier state of processing that, if an undo process was performed, existed just prior to performance of an undo process, or otherwise exists as originally distributed and potentially modified thereafter by other processes; and

15   the apparatus further comprises logic that concurrently registersthe private re-do state to the private work state.

77.   The apparatus of claim 60, wherein:

the private representative states include a private work state embodied in
20   retentive media, that represents a present state of processing on the public data;

the private representative states include a private re-do state embodied in retentive media, that represents an earlier state of processing that, if an undo process was performed, existed just prior to performance of an undo process, or otherwise exists as originally distributed and potentially modified thereafter by other processes;

25   the private representative states include a private undo state embodied in retentive media, that represents an earlier state of processing on the public data; and

the apparatus further comprises logic that concurrently registers the private work state to the private re-do state, and thereafter concurrently registers the private undo state to the private work state.

5   78.   The apparatus of claim 60, wherein:

the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private original state embodied in retentive media;

10   the logic that distributes the public data to the private work area includes logic that distributes the public data to the private original state; and

the apparatus further comprises logic that concurrently registers the private original state to the private work state.

15   79.   The apparatus of claim 60, wherein:

the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private original state embodied in retentive media;

20   the private representative states include one or more other representative states embodied in retentive media; and

the apparatus further comprises logic that assigns the private original state to the one or more other representative states and to the private work state,

wherein the logic that assigns the private original state to the other representative
25   states and to the private work state comprises logic that concurrently registers the private

original state to the other representative states, and concurrently registers the private original state to the private work state.

80.   The apparatus of claim 60, wherein:

the private representative states are embodied in retentive media; and

the apparatus further comprises logic that, after distributing the public data to the private representative states embodied in retentive media, again distributes the public data to the private representative states embodied in retentive media.

81.   The apparatus of claim 60, wherein:

the private representative states are embodied in retentive media; and

the apparatus further comprises logic that, after distributing the public data to the private representative states embodied in retentive media, distributes to the private representative states only those fields of the public data that correspond to unmodified fields of the private representative states.

82.   The apparatus of claim 81, wherein:

one or more of the private representative states embodied in retentive media include a private work state that represents a present state of processing on the public data; and

the apparatus further comprises:

logic that detects that a field of the private work state is presently under processing, and in response thereto treats said field of the private work state as a modified field of the private representative states.

83.   The apparatus of claim 60, wherein:

the private representative states includes a private work state that represents a present state of processing on the public data;

the private representative states includes a private original state;

5   the logic that distributes the public data to the private representative states includes logic that distributes the public data to the private original state; and

the logic that updates the public data by cooperatively posting data from the private representative states comprises logic that compares the private work state to the private original state and cooperatively posts to the public data only those fields of the 10   private work state which differ from corresponding fields of the private original state.

84.   The apparatus of claim 83, wherein the private work state and the private original state are embodied in retentive media.

15   85.   The apparatus of claim 83, further comprising:

logic that, prior to updating the public data, updates the private original state to reflect data previously posted to the public data.

86.   The apparatus of claim 83, wherein the logic that cooperatively posts to the public 20   data only those fields of the private work state that differ from corresponding fields of the private original state comprises:

logic that repeatably attempts to obtain a privilege to write to the public data until the privilege is obtained;

logic that writes differentiated fields of the private work state to the public data; 25   and

logic that thereupon releases the privilege to write to the public data,

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wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

5   87.   The apparatus of claim 86, wherein the apparatus further comprises:

logic that writes to the private original state, data written to the public data.

88.   The apparatus of claim 60, wherein:

one or more of the private representative states includes a private work state that
10   represents a present state of processing on the public data;

one or more of the private representative states includes a private last posted
state;

the logic that distributes the public data to the private representative states embodied in retentive media includes logic that distributes the public data to the private last
15   posted state; and

the logic that updates the public data by cooperatively posting data from the private representative states comprises logic that compares the private work state to the private last posted state, cooperatively posts to the public data only those fields of the private work state which differ from corresponding fields of the private last posted state,
20   and thereupon assigns to the last posted state, fields posted to the public data.

89.   The apparatus of claim 88, wherein the private work state and the private last posted state are embodied in retentive media.

90.   The apparatus of claim 88, wherein the logic that cooperatively posts to the public data only those fields of the private work state that differ from corresponding fields of the private last posted state comprises:

logic that repeatably attempts to obtain a privilege to write to the public data until the privilege is obtained;

logic that writes differentiated fields of the private work state to the public data; and

logic that thereupon releases the privilege to write to the public data,

wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

91.   The apparatus of claim 90, wherein the method further comprises:

logic that writes to the private last posted state, data written to the public data.

92.   The apparatus of claim 60, wherein the logic that cooperatively posts data from the private representative states comprises:

logic that obtains a privilege to write to the public data;

logic that writes the data from the private representative states to the public data; and

logic that thereupon releases the privilege to write to the public data,

wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

93.   The apparatus of claim 92, wherein the logic that obtains the privilege to write to the public data comprises:

logic that repeatably attempts to obtain the privilege to write to the public data until the privilege is obtained.

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94.   The apparatus of claim 92, further comprising logic that delegates performance of obtaining the privilege to write to the public data to a cooperative processing object.

95.   The apparatus of claim 92, further comprising:

10   logic that delegates, to a cooperative processing object, performance of obtaining the privilege to write to the public data, performance of writing the data from the private representative states to the public data, and performance of releasing the privilege to write to the public data; and

the cooperative processing object, wherein the cooperative processing object
15   further delegates, to a delegated cooperative processing object, performance of obtaining the privilege to write to the public data, performance of writing the data from the private representative states to the public data, and performance of releasing the privilege to write to the public data.

20   96.   The apparatus of claim 95, further comprising:

logic that detects that performance of obtaining the privilege to write to the public data, performance of writing the data from the private representative states to the public data, and performance of releasing the privilege to write to the public data have been successfully delegated to the delegated cooperative processing object, and in response
25   thereto, causes the cooperative processing object to pass control to a subsequent phase of processing.

97.   The apparatus of claim 96, further comprising:

logic that concurrently registers a phase identifier to retentive media so that a process iterating from the registered phase identifier resumes operation.

5   98.   The apparatus of claim 95, further comprising:

logic that concurrently registers a phase identifier to retentive media so that a process iterating from the registered phase identifier resumes operation.

99.   The apparatus of claim 60, wherein the logic that cooperatively posts data from
10   the private representative states comprises:

logic that delegates performance of cooperative posting to a delegated cooperative posting object; and

the delegated cooperative posting object,

wherein in response to said delegating, the delegated cooperative posting object
15   performs:

repeatably attempting to obtain a privilege to write to the public data until the privilege is obtained;

writing one or more of the private states to the public data; and

thereupon releasing the privilege to write to the public data,

20   wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

100.   The apparatus of claim 99, wherein the delegated cooperative posting object is
25   distinct from a cooperative posting object that performs the delegating step.

101.   The apparatus of claim 60, wherein:

one or more of the private representative states embodied in retentive media includes a private work state that represents a present state of processing on the public data;

one or more of the private representative states embodied in retentive media includes a private original state that represents the public data as initially distributed to the private representative states; and

the logic that distributes the public data to the private representative states comprises:

logic that distributes a single copy of the public data to an assignment compatible instance of the public data in a local private work area;

logic that distributes the single copy of the public data from the assignment compatible instance of the public data in the local private work area to a remainder of the private representative states;

logic that locally establishes an obligation to post to the public data by detecting a difference between the private original state and the private work state; and

logic that performs cooperative posting to the public data only if the obligation to post to the public data is established.

102.   The apparatus of claim 101, further comprising:

logic that updates the private original state to reflect data being posted to the public data.

103.   The apparatus of claim 60, further comprising:

logic that stores in the private representative states an auxiliary state that is not representative of the public data, and that is not representative of processing of the public data.

5   104.   The apparatus of claim 103, further comprising logic that uses the auxiliary state as part of a process.

105.   The apparatus of claim 60, further comprising a cooperative processing object that comprises the logic that distributes the public data to the private representative states

10   and the logic that updates the public data by cooperatively posting data from the private representative states.

106.   The apparatus of claim 105, wherein the cooperative processing object further comprises logic that conditionally navigates to a new public data instance based upon

15   successful completion of updating the public data by cooperatively posting data from the private representative states.

107.   The apparatus of claim 106, wherein the logic that updates the public data by cooperatively posting data from the private representative states operates in response to a

20   write to public instance event that is invoked by the cooperative processing object in response to detection of an attempted navigation to the new public data instance.

108.   The apparatus of claim 60, wherein the private representative states comprise:

a local private work area; and

25   a remote private work area.

109.   The apparatus of claim 60, wherein the public data is stored in a database system.

110.   The apparatus of claim 60, comprising one or more operating system objects that include the logic that distribute the public data to the private representative states and the logic that updates the public data by cooperatively posting data from the private representative states.

111.   The apparatus of claim 60, further comprising:

        a server-side application that assigns a unique identification to a client application session;

        logic that passes a universal resource indicator to a local application, wherein the universal resource indicator includes the unique identification and a process argument;

        logic that associates records of one or more private representative states with the client application session and one or more associated, processed data by means of the unique identification; and

        logic that passes the universal resource indicator from a client system to the server-side application,

        wherein the server-side system further comprises logic that uses the universal resource indicator to resume the client application session.

112.   The apparatus of claim 111, further comprising:

        logic that logs the universal resource indicator to a table in response to the local application requesting a universal resource indicator from the server-side application.

113.   The apparatus of claim 112, further comprising:

logic that uses the universal resource indicator to identify a last log entry in the table; and

logic that uses the identified last log entry in the table to restore a previous, ongoing navigational and/or work status of a local application.

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114.   The apparatus of claim 113, further comprising:

logic that presents to the local application a retained history of client navigation.

115.   The apparatus of claim 114, wherein the retained history of client navigation is in
10   the form of links comprising one or more universal resource indicators of the history.

116.   The apparatus of claim 60, further comprising:

logic that restricts data-oriented operations to permitted, integral data.

15   117.   A machine-readable storage medium having stored thereon one or more instructions for causing a processor to cooperatively process public data by performing:

distributing the public data to private representative states;

without holding an exclusive privilege to write to the public data, generating private states of the public data by processing one or more private representative states of
20   the public data; and

updating the public data by cooperatively posting data from the private representative states.

118.   The machine-readable storage medium of claim 117, wherein the one or more instructions further cause the processor to perform concurrently registering at least one of the one or more generated private states to retentive media.

5   119.   The machine-readable storage medium of claim 118, wherein said processing of the one or more private representative states of the public data is oriented to a concurrently registered private state, whereby a startup procedure re-triggering any previously running process from a given phase of operation automatically resumes an active process or state, should it be terminated, however inadvertently.

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120.   The machine-readable storage medium of claim 118, wherein:

the one or more private representative states of the public data are stored in a table.

15   121.   The machine-readable storage medium of claim 120, wherein the one or more instructions further cause the processor to perform negotiating private representative states of the public data by means of any number of identifying fields, classifying states relevant to processing.

20   122.   The machine-readable storage medium of claim 118, wherein the one or more instructions further cause the processor to perform:

retaining one or more of the generated private states in retentive media associated with a remote system.

25   123.   The machine-readable storage medium of claim 122, wherein retaining one or more of the generated private states in retentive media associated with the remote system is performed in response to detecting a write to remotely maintained state event.

147

124.   The machine-readable storage medium of claim 118, wherein the one or more instructions further cause the processor to perform causing one or more nodes of cooperative applications to register separate copies of one or more private representative states to retentive media in conjunction with registration of a separate copy of the public data to retentive media.

125.   The machine-readable storage medium of claim 117, wherein the one or more instructions further cause the processor to perform:

using one or more cooperative resource descriptors to negotiate cooperative resources related to public data,

wherein the one or more cooperative resource descriptors relate the cooperative resources to the public data.

126.   The machine-readable storage medium of claim 125, wherein the one or more instructions further cause the processor to perform:

using a common organization of data processing resources in relation to a public data resource; and

in response to identifying any one of the one or more cooperative resource descriptors to focusable processes, negotiating the data processing resources designated by the identified cooperative resource descriptor in accordance with the common organization.

127.   The machine-readable storage medium of claim 126, wherein the one or more instructions further cause the processor to perform:

interchangeably focusing processes operating on the organization of data processing resources; and

managing the availability of resources to processes so as to enable a given organization of data processing resources to be negotiated.

128.   The machine-readable storage medium of claim 125, wherein the one or more instructions further cause the processor to perform:

using a graphic control to invoke a process on a public or private data resource identified by a focused cooperative resource descriptor.

129.   The machine-readable storage medium of claim 125, wherein the one or more instructions cause the processor to perform automatically focusing an intended cooperative resource descriptor, or organization as indicated by a cooperative resource descriptor, in response to an event or condition devised to be unique and to coincide with demand for resources described by the resource descriptor or belonging to the organization.

130.   The machine-readable storage medium of claim 129, wherein the one or more instructions further cause the processor to perform:

concurrently registering to retentive media an identity of the focused cooperative resource descriptor in response to focusing the cooperative resource descriptor; and

after termination of the application, initiating a subsequent session of the application, including re-imposing conditions triggering re-focus of the cooperative resources associated by the cooperative resource descriptor;

whereby the subsequent session of the application is automatically restored with a cooperative focus of the application intact.

131.   The machine-readable storage medium of claim 129, wherein the one or more instructions further cause the processor to perform:

concurrently registering to retentive media an identity of a descriptor of interfaces associated with the organization of cooperative resources needed by the interfaces; and

after termination of the application, initiating a subsequent session of the application, including re-imposing conditions triggering re-focus of the cooperative

5   resources associated by the cooperative resource descriptor;

whereby the subsequent session of the application is automatically restored with a cooperative focus of the application intact.

132.   The machine-readable storage medium of claim 1, wherein:

10   the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private undo state embodied in retentive media, that represents an earlier state of processing on the public data; and

the one or more instructions further cause the processor to perform concurrently

15   registering the private work state to the private undo state.

133.   The machine-readable storage medium of claim 117, wherein:

the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

20   the private representative states include a private re-do state embodied in retentive media, that represents an earlier state of processing that, if an undo process was performed, existed just prior to performance of an undo process, or otherwise exists as originally distributed and potentially modified thereafter by other processes; and

the one or more instructions further cause the processor to perform concurrently

25   registering the private re-do state to the private work state.

134.   The machine-readable storage medium of claim 117, wherein:

the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private re-do state embodied in retentive media, that represents an earlier state of processing that, if an undo process was performed, existed just prior to performance of an undo process, or otherwise exists as originally distributed and potentially modified thereafter by other processes;

the private representative states include a private undo state embodied in retentive media, that represents an earlier state of processing on the public data; and

the one or more instructions further cause the processor to perform concurrently registering the private work state to the private re-do state, and thereafter concurrently registering the private undo state to the private work state.

135.   The machine-readable storage medium of claim 117, wherein:

the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private original state embodied in retentive media;

distributing the public data to the private work area includes distributing the public data to the private original state; and

the one or more instructions further cause the processor to perform concurrently registering the private original state to the private work state.

136.   The machine-readable storage medium of claim 117, wherein:

the private representative states include a private work state embodied in retentive media, that represents a present state of processing on the public data;

the private representative states include a private original state embodied in retentive media;

the private representative states include one or more other representative states embodied in retentive media; and

5   the one or more instructions further cause the processor to perform assigning the private original state to the one or more other representative states and to the private work state,

wherein assigning the private original state to the other representative states comprises concurrently registering the private original state to the other representative

10   states, and assigning the private original state to the private work state comprises concurrently registering the private original state to the private work state.

137.   The machine-readable storage medium of claim 117, wherein:

the private representative states are embodied in retentive media; and

15   the one or more instructions further cause the processor to perform, after distributing the public data to the private representative states embodied in retentive media, again distributing the public data to the private representative states embodied in retentive media.

20   138.   The machine-readable storage medium of claim 117, wherein:

the private representative states are embodied in retentive media; and

the one or more instructions further cause the processor to perform, after distributing the public data to the private representative states embodied in retentive media, distributing to the private representative states only those fields of the public data

25   that correspond to unmodified fields of the private representative states.

139.   The machine-readable storage medium of claim 138, wherein:

one or more of the private representative states embodied in retentive media include a private work state that represents a present state of processing on the public data; and

5   the one or more instructions further cause the processor to perform:

detecting that a field of the private work state is presently under processing, and in response thereto treating said field of the private work state as a modified field of the private representative states.

10   140.   The machine-readable storage medium of claim 117, wherein:

the private representative states includes a private work state that represents a present state of processing on the public data;

the private representative states includes a private original state;

distributing the public data to the private representative states includes
15   distributing the public data to the private original state; and

updating the public data by cooperatively posting data from the private representative states comprises comparing the private work state to the private original state and cooperatively posting to the public data only those fields of the private work state which differ from corresponding fields of the private original state.

20

141.   The machine-readable storage medium of claim 140, wherein the private work state and the private original state are embodied in retentive media.

142.   The machine-readable storage medium of claim 140, wherein the one or more
25   instructions further cause the processor to perform:

prior to updating the public data, updating the private original state to reflect data previously posted to the public data.

143.   The machine-readable storage medium of claim 140, wherein cooperatively
5   posting to the public data only those fields of the private work state that differ from corresponding fields of the private original state comprises:

repeatably attempting to obtain a privilege to write to the public data until the privilege is obtained;

writing differentiated fields of the private work state to the public data; and

10   thereupon releasing the privilege to write to the public data,

wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

15   144.   The machine-readable storage medium of claim 143, wherein the one or more instructions further cause the processor to perform:

writing to the private original state, data written to the public data.

145.   The machine-readable storage medium of claim 117, wherein:

20   one or more of the private representative states includes a private work state that represents a present state of processing on the public data;

one or more of the private representative states includes a private last posted state;

distributing the public data to the private representative states embodied in
25   retentive media includes distributing the public data to the private last posted state; and

updating the public data by cooperatively posting data from the private representative states comprises comparing the private work state to the private last posted state, cooperatively posting to the public data only those fields of the private work state which differ from corresponding fields of the private last posted state, and thereupon

5   assigning to the last posted state, fields posted to the public data.

146.   The machine-readable storage medium of claim 145, wherein the private work state and the private last posted state are embodied in retentive media.

10   147.   The machine-readable storage medium of claim 145, wherein cooperatively posting to the public data only those fields of the private work state that differ from corresponding fields of the private last posted state comprises:

repeatably attempting to obtain a privilege to write to the public data until the privilege is obtained;

15   writing differentiated fields of the private work state to the public data; and

thereupon releasing the privilege to write to the public data,

wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

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148.   The machine-readable storage medium of claim 147, wherein the one or more instructions further cause the processor to perform:

writing to the private last posted state, data written to the public data.

25   149.   The machine-readable storage medium of claim 117, wherein cooperatively posting data from the private representative states comprises:

obtaining a privilege to write to the public data;

writing the data from the private representative states to the public data; and

thereupon releasing the privilege to write to the public data,

wherein a duration defined from a first moment when the privilege is obtained
5   until a second moment when the privilege is released extends for no more than a
sufficiently minimal duration.

150.   The machine-readable storage medium of claim 149, wherein obtaining the
privilege to write to the public data comprises:

10   repeatably attempting to obtain the privilege to write to the public data until the
privilege is obtained.

151.   The machine-readable storage medium of claim 149, wherein the one or more
instructions further cause the processor to perform delegating performance of obtaining the
15   privilege to write to the public data to a cooperative processing object.

152.   The machine-readable storage medium of claim 149, wherein the one or more
instructions further cause the processor to perform:

delegating, to a cooperative processing object, performance of obtaining the
20   privilege to write to the public data, performance of writing the data from the private
representative states to the public data, and performance of releasing the privilege to write
to the public data; and .

the cooperative processing object further delegating, to a delegated cooperative
processing object, performance of obtaining the privilege to write to the public data,
25   performance of writing the data from the private representative states to the public data,
and performance of releasing the privilege to write to the public data.

153.   The machine-readable storage medium of claim 152, wherein the one or more instructions further cause the processor to perform:

detecting that performance of obtaining the privilege to write to the public data, performance of writing the data from the private representative states to the public data, and performance of releasing the privilege to write to the public data have been successfully delegated to the delegated cooperative processing object, and in response thereto, the cooperative processing object passing control to a subsequent phase of processing.

154.   The machine-readable storage medium of claim 153, wherein the one or more instructions further cause the processor to perform:

concurrently registering a phase identifier to retentive media so that a process iterating from the registered phase identifier resumes operation.

155.   The machine-readable storage medium of claim 152, wherein the one or more instructions further cause the processor to perform:

concurrently registering a phase identifier to retentive media so that a process iterating from the registered phase identifier resumes operation.

156.   The machine-readable storage medium of claim 117, wherein cooperatively posting data from the private representative states comprises:

delegating performance of cooperative posting to a delegated cooperative posting object,

wherein in response to said delegating, the delegated cooperative posting object performs:

repeatably attempting to obtain a privilege to write to the public data until the privilege is obtained;

writing one or more of the private states to the public data; and

thereupon releasing the privilege to write to the public data,

5   wherein a duration defined from a first moment when the privilege is obtained until a second moment when the privilege is released extends for no more than a sufficiently minimal duration.

157.   The machine-readable storage medium of claim 156, wherein the delegated
10   cooperative posting object is distinct from a cooperative posting object that performs the delegating step.

158.   The machine-readable storage medium of claim 117, wherein:

one or more of the private representative states embodied in retentive media
15   includes a private work state that represents a present state of processing on the public data;

one or more of the private representative states embodied in retentive media includes a private original state that represents the public data as initially distributed to the private representative states; and

20   distributing the public data to the private representative states comprises:

distributing a single copy of the public data to an assignment compatible instance of the public data in a local private work area;

distributing the single copy of the public data from the assignment compatible instance of the public data in the local private work area to a remainder of the
25   private representative states;

locally establishing an obligation to post to the public data by detecting a difference between the private original state and the private work state; and

performing cooperative posting to the public data only if the obligation to post to the public data is established. .

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159.   The machine-readable storage medium of claim 158, wherein the one or more instructions further cause the processor to perform:.

updating the private original state to reflect data being posted to the public data.

10   160.   The machine-readable storage medium of claim 117, wherein the one or more instructions further cause the processor to perform:

storing in the private representative states an auxiliary state that is not representative of the public data, and that is not representative of processing of the public data.

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161.   The machine-readable storage medium of claim 160, wherein the one or more. instructions further cause the processor to perform using the auxiliary state as part of a process.

20   162.   The machine-readable storage medium of claim 117, wherein distributing the public data to the private representative states and updating the public data by cooperatively posting data from the private representative states are performed by a cooperative processing object.

25   163.   The machine-readable storage medium of claim 162, wherein the one or more instructions further cause the processor to perform: the cooperative processing object

conditionally navigating to a new public data instance based upon successful completion of updating the public data by cooperatively posting data from the private representative states.

5 164.   The machine-readable storage medium of claim 163, wherein updating the public data by cooperatively posting data from the private representative states is performed in response to a write to public instance event that is invoked by the cooperative processing object in response to detection of an attempted navigation to the new public data instance.

10 165.   The machine-readable storage medium of claim 117, wherein the private representative states comprise:

    a local private work area; and

    a remote private work area.

15 166.   The machine-readable storage medium of claim 117, wherein the public data is stored in a database system.

167.   The machine-readable storage medium of claim 117, wherein distributing the public data to the private representative states and updating the public data by
20 cooperatively posting data from the private representative states are performed by one or more operating system objects.

168.   The machine-readable storage medium of claim 117, wherein the one or more instructions further cause the processor to perform:

25   a server-side application assigning a unique identification to a client application session;

passing a universal resource indicator to a local application, wherein the universal resource indicator includes the unique identification and a process argument;

associating records of one or more private representative states with the client application session and one or more associated, processed data by means of the unique identification;

passing the universal resource indicator from a client system to the server-side application; and

the server-side system using the universal resource indicator to resume the client application session.

169.   The machine-readable storage medium of claim 168, further comprising:

logging the universal resource indicator to a table in response to the local application requesting a universal resource indicator from the server-side application.

170.   The machine-readable storage medium of claim 169, wherein the one or more instructions further cause the processor to perform:

using the universal resource indicator to identify a last log entry in the table; and

using the identified last log entry in the table to restore a previous, ongoing navigational and/or work status of a local application.

171.   The machine-readable storage medium of claim 170, wherein the one or more instructions further cause the processor to perform:

presenting to the local application a retained history of client navigation.

172.   The machine-readable storage medium of claim 171, wherein the retained history of client navigation is in the form of links comprising one or more universal resource indicators of the history.

5   173.   The machine-readable storage medium of claim 117, wherein the one or more instructions further cause the processor to perform:

restricting data-oriented operations to permitted, integral data.

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